

**NAE Board at your service**

The Nevada Adult Educators' Board of Directors has been meeting monthly, planning professional development around the new GED® test and other topics to be offered free or discounted to members. In addition to promoting and providing educational and career development opportunities for adult educators, the organization works to expand public awareness of the importance of literacy, adult education, and lifelong learning.

Join or renew your membership (<http://www.nvadulthood.org>) for complete access to these opportunities! Annual dues are \$35 for this academic year.

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**If you want to go fast, go alone.**

**If you want to go far,  
go with others.**

**—African Proverb**

# Getting to the roots of STEM

## What it is

STEM (science, technology, engineering, math) education is one of the most misinterpreted education and workforce acronyms used today. Most people think it simply means that we need to teach more math and science, but true STEM is an integrated approach to learning that occurs across curricular areas and seamlessly blends academic and technical skill sets.

STEM education embraces the development of critical thinking skills, utilizing logical thought processes such as engineering design and scientific method across subject areas. Does this mean we should sacrifice other subject areas to concentrate more on science and math? Absolutely not! English skills are extremely important for us to be the best communicators we can; history teaches us that tragedies and triumphs have made us the civilization we are today; the arts teach us visualization, the benefits of personal expression, and creativity.

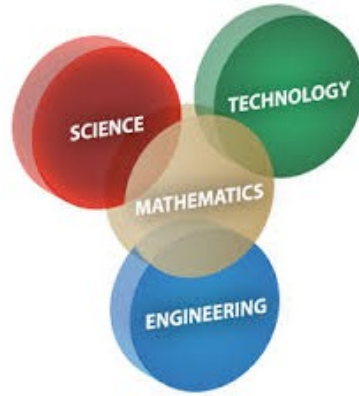
STEM education allows subjects to flow and complement each other; builds student capacity to see the big picture as well as the small; and develops independent thinking skills to build a path between the two on a foundation of critical thinking, problem solving, and collaboration.

True STEM education occurs at the successful intersection of family, industry, government, and education:

- Family — Take responsibility for child's education, support education reform, get involved in activities that promote STEM competencies in/outside of school
- Industry — Provide career exploration, inspiration, and “real world” applications; support funding
- Government — Incentivize efforts that support high-growth STEM fields; provide funding, infrastructure, supportive public policy
- Education — Correlate curriculum to meet industry expectations, develop evolving curriculum that will grow with the economy, break down “subject silos,” incorporate essential soft skills and technical competencies

STEM education clearly requires the support of all sectors. Figure out where you fit in the puzzle so you can do your part! Possibilities include being a role model, encouraging youth in your career field, creating new curriculum, developing educational policy, securing funding for new initiatives, and involvement in nonprofits such as Virginia's [Future Focus Foundation](#) and [Region 2000 Technology Council](#).

*Editor's note: This article was condensed from “How STEM Education Will Save our Economy” by Elizabeth Narehood, managing director of Virginia's [Future Focus Foundation](#), [NAWDP's Advantage newsletter](#), July 2013.*



## Not just for college grads

[The Hidden STEM Economy](http://nvae.us/96) (<http://nvae.us/96>), a June 2013 report by Jonathan Rothwell ([Brookings Institution](#)), focuses on the often-overlooked role of workers with less than a four-year degree in today's STEM economy. Rothwell maintains that the “excessively professional definition of STEM jobs has led to missed opportunities to identify and support valuable training and career development.” He believes STEM workers are a vital component in driving economic growth, but policymakers have focused

too intently on STEM workers needing a bachelor's degree or above, “while overlooking a strong potential workforce of those with less education but substantial STEM skills.”

Rothwell defines the STEM economy more broadly than is typical in studies of STEM occupations, which focus on jobs that he defines as “high-STEM jobs in any one field.” He is unique in including nonprofessional jobs among high-STEM jobs and his definition includes many jobs that do not require a four-year college degree. Rothwell contends that this is a better understanding of the STEM economy. In his view, the overemphasis on four-year and higher degrees as the only path to a career in STEM occupations neglects cheaper and more widely available pathways that use community colleges and technical schools to prepare students for STEM occupations.

Rothwell reports four key findings:

1. As of 2011, 20 percent of all jobs — about 26 million in the current economy — require a high level of knowledge in any one STEM field.
2. Half of all STEM-knowledge jobs can be filled by workers without bachelor's degrees, and these jobs pay 10 percent more (on average \$53,000 per year) than similar non-STEM jobs. These blue-collar jobs are about 30 percent of all high-STEM jobs.
3. Sub-bachelor's degree STEM jobs are prevalent in every large metropolitan area, unlike those requiring bachelor's degrees, which are available in a select few areas.
4. Metropolitan economies that are more STEM-oriented are strongest on economic indicators, such as innovation and employment.

He concludes, “It is difficult to argue, given all the attention it has received, that STEM knowledge is underappreciated. Yet because the focus has been on professional STEM jobs, a number of potentially useful interventions have been ignored. In this sense, jobs that require less than a bachelor's degree represent a hidden and unheralded STEM economy.”






## Online PD: anytime, anywhere





Online professional development continues to expand, with more sites regularly offering more courses. Some have registration fees, many are free! Below are some of the sites Nevada's adult educators have found especially useful.









### For teachers new to adult education

-  At <http://www.c-pal.net/course/index.html> are links to five free, short, self-paced courses for adult literacy instructors new to the field. The site is sponsored by OVAE (Office of Vocational and Adult Education).
-  ESL FastTrack is an in-depth, facilitated eight-week course for novice ESL teachers. Experienced instructors who have not had formal training report it's very useful to them, also. The \$263 registration fee includes the textbook. Next course starts October 22; visit <http://nvae.us/7f>.
-  At [www.wonderlic.com/webinars](http://www.wonderlic.com/webinars) are various one-hour webinars on many topics.

### Especially for ESL teachers


-  English Language Learner University ([www.ell-u.org](http://www.ell-u.org)) is a free online professional development network offering various online courses.
-  At [www.elcivicsonline.org](http://www.elcivicsonline.org) are links to four courses that will prepare ESL instructors and volunteers to integrate U.S. history, U.S. government, civic engagement, and the naturalization process into adult ESL classes. Free.
-  Heinle/Cengage (<http://eltadvantage.heinle.com/>) offers self-paced courses with moderated discussion boards on a variety of topics for teachers of ELLs. Courses last six weeks, take about 24-30 hours to complete, and cost \$199.
-  Pearson Longman's [Teacher Development Interactive](#) series offers four modules for teaching ESL (fundamentals, reading, listening, and speaking).

### Specific topics for all

-  [Elearningpd.worlded.org](http://Elearningpd.worlded.org), an update/replacement for [ProfessionalStudiesAE.org](http://ProfessionalStudiesAE.org), offers a wide variety of free, self-paced courses. The organization also schedules in-depth, facilitated courses throughout the year. Fees range from \$189 - \$269. Scheduled to begin this fall:
  - [Integrating Career Awareness into the ABE and ESOL Classroom](#) (Oct. 2 - Nov. 14)
  - [Team Teaching an Integrated Curriculum to Accelerate Learning](#) (Oct. 8 - Nov. 11)
  - [Helping Students Stay: Exploring Program and Classroom Persistence Strategies](#) (Oct. 15 - Dec. 9)
  - [Navigating Pathways to Opportunity: Comprehensive Student Supports](#) (Oct. 22 - Nov. 26)
  - [Differentiated Instruction](#) (Oct. 22 - Dec. 23)
  - [College Readiness for Adults: Beyond Academic Preparation!](#) (Oct. 24 - Dec. 18)
  - [Algebra: Introducing Algebraic Reasoning](#) (Oct. 27 - Dec. 20)
  - [Foundations of Teaching Adult Numeracy](#) (Oct. 29 - Dec. 14)
  - [Promoting Mental Health in the ABE/ESOL Classroom](#) (Nov. 5 - Dec. 23)
-  [LINCS' Learner Web](#) (<http://nvae.us/97>) currently offers free professional development around (ABE) reading and (ELL) emergent readers and vocabulary.
-  <http://www.proliteracyednet.org/> offers a wide variety of free courses on various topics. The site also contains links for student practice.
-  The National Association for Adults with Special Learning Needs often hosts webinars for a nominal fee. Visit [www.naasln.org](http://www.naasln.org) for current offerings.
-  Florida TechNet, a grant-funded project that provides technology assistance and training to adult and community education providers, has generously opened its online courses to adult educators through-out the country. Visit [www.floridatechnet.org/moodle](http://www.floridatechnet.org/moodle) to access free, self-paced modules on ABE, GED, ESOL and other topics.
-  [Virginia Adult Learning Resource Center](#) (<http://www.valrc.org/trainings/onlinecourses.html>) offers various facilitated online classes. There is an access fee for non-Virginians.

**Wait! There's more!** Visit <http://nvae.us/98> for an extensive list of asynchronous and synchronous, free and commercial online professional development.

Community Multicultural Center  
2215A Renaissance Drive  
Las Vegas, NV 89119



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## **TX students passing at higher rate via CBT**

According to a Wacotrib.com July 22 article quoting Karen Armstead, testing administrator at Texas State Technical College, Texas residents are passing the new computer-based test at a higher rate than the paper format.

About 83 percent of testers had passed the computer exam at the college's testing center, compared to about 67 percent of residents who took the paper format. Statewide, about 90 percent of GED testers pass the computer format, according to statistics from provider GED Testing Service.

In addition, test-takers finish the computer exam at a faster pace, taking 90 minutes less on average to complete the full five-part exam. Read more at <http://nvae.us/9a>.

## **GEDTS releases 2012 Annual Statistical Report**

GED Testing Service recently released the *2012 Annual Statistical Report on the GED® Test*. This is the 55<sup>th</sup> statistical report in the program's 70-year history, during which more than 20 million adults without a high school credential have earned their jurisdiction's GED® test credential.

Some highlights from the report:

- More than 702,000 adults worldwide took at least one of the five GED® test content areas
- Approximately 607,000 individuals completed their GED® test in 2012
- Almost 418,000 test takers met the passing standard on the test by earning scores equal to or higher than the top 60% of graduating high school seniors

The 2012 testing year was the first full year the GED® test was offered on computer; 10,140 candidates tested via this method.

The report is available from GEDTS' home page ([www.GEDtestingservice.com/educators](http://www.GEDtestingservice.com/educators)) or directly from <http://nvae.us/99>.